

REMARKS

The claims have been amended by rewriting claims 2-6, 9-12, 14-17 and 22, canceling claims 7-8, and adding new claims 23-24. Claims 2-6, 9-12 and 14-24 remain in the application.

Reconsideration of this application is respectfully requested.

Claims 2, 15 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Haggerty, et al. (USPN 6,331,983) in view of Deng, et al. (USPN 6,208,647). In support, the Examiner asserts that Haggerty discloses the step of determining whether the receiving host receives any packets within a designated time period (col. 17, lines 22-24 and 39-42), and the step of determining that the receiving host is not reliably joined to the multicast group address if packets are not received by the receiving host within the designated time period (col. 19, lines 29-51). The Examiner acknowledges that Haggerty fails to disclose the step of determining that the receiving host is reliably joined to the multicast group address if any packets are received within the designated time period. Since Haggerty is silent on this issue, the Examiner points to Deng and asserts that the combination of these references makes obvious the invention of the present application. The Applicants, however, strongly disagree.

Regardless of how obvious it may be to combine the teachings of Haggerty and Deng, the Applicants assert that such combination fails to teach the invention of the present application.

As amended, each claim of the present application recites or depends from claims that recite:

*...determining whether any packets are received by the first host within a designated time period after the step of issuing a join command; and*

*if any packets are received by the first host within the designated time period, determining that the first host is joined to the multicast group address; otherwise, if any packets are not received by the first host within the designated time period, determining that the first host is not joined to the multicast group address.*

As set forth in the specification, the present invention provides a method for the first host to determine whether it has joined a multicast group address (page 4, lines 17-19). Particularly, upon receiving indicia that a second host is actively sourcing packets to the multicast group address, the first host issues a join command in an attempt to join the multicast group address. If

the first host receives a packet within a designated time period associated with the attempt, it is determined that the first host is joined to the multicast group address; otherwise, it is determined that the first host is not joined to the multicast group address (page 4, lines 23-27). Thus, the present invention provides for detecting failed Join(s) relatively quickly (i.e., without relying on periodic updates from router(s) of the network) so that, when necessary, the Join(s) may be re-accomplished to reduce or eliminate the likelihood that the receiving host(s) will lose critical information that may be conveyed in a talkgroup or point-to-point call (page 3, lines 12-17).

In contrast to the present invention, Haggerty et al. discloses a multicast switching method whereby the sender of a multicast message starts a timer upon transmission of the message and waits for acknowledgements from the receivers. If the timer expires prior to receiving an acknowledgement from a given receiver, the sender resends the message to the given receiver (col. 17, lines 39-45). Nowhere does Haggerty teach, suggest or make obvious *...determining whether any packets are received by the first host within a designated time period after the step of issuing a join command; and*

*if any packets are received by the first host within the designated time period, determining that the first host is joined to the multicast group address; otherwise, if any packets are not received by the first host within the designated time period, determining that the first host is not joined to the multicast group address.*

The Examiner acknowledges that Haggerty fails to disclose that it is determined that the first host is joined to the multicast group address if any packet is received within a designated time period, and attempts to use Deng to fill this void. Deng, however, discloses starting a timer when a multicast address is stored in the MAC address table. In contrast to the present invention, the timer described in the Deng reference is used to determine when to remove the multicast address from the MAC address table (col. 5, lines 58-65).

Thus, the Applicants assert that these two references when combined would not permit one skilled in the art to produce the invention of the present application. Based upon this lack of teaching, the Applicants assert that the cited references fail to teach the invention of the present application, for nowhere do they teach, suggest, or make obvious

*...determining whether any packets are received by the receiving host within a designated time period after the step of issuing a join command; and*

*if any packets are received by the receiving host within the designated time period, determining that the receiving host is joined to the multicast group address; otherwise, if any packets are not received by the receiving host within the designated time period, determining that the receiving host is not joined to the multicast group address.*

Since the differences between the subject matter as claimed and the cited references are so clearly significant, the Applicants assert that the subject matter as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made. In accordance, the Applicants assert that the cited references fail to teach, suggest or make obvious the invention of the present application.

Claims 6-9, 12, 16 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Haggerty, et al. (USPN 6,331,983) in view of Deng, et al. (USPN 6,208,647). Claims 3-5, and 17-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Haggerty, et al. (USPN 6,331,983) in view of Deng, et al. (USPN 6,208,647) and further in view of Donahue, et al. (USPN 6,266,339). Claims 10, 11 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Haggerty, et al. (USPN 6,331,983) in view of Deng, et al. (USPN 6,208,647) and further in view of Adelman, et al. (USPN 6,006,259). Since claims 2, 15 and 22 are believed to be allowable, all claims that depend therefrom contain the limitations of these allowable claims and merely recite additional limitations that should not preclude patentability.

Accordingly, this application is believed to be in proper form for allowance and reconsideration and allowance of the claims as amended and presented herein is respectfully requested. Upon reconsideration, the Applicants respectfully request that claims 2-6, 9-12 and 14-24 be passed to allowance.

Please charge any fees associated herewith, including extension of time fees, to Deposit Account No. 13-4772.

Respectfully submitted,

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## CLAIMS

2. (Twice Amended) A method comprising:

at a first host:

[sending, from a sourcing host to one or more network devices,] receiving indicia that a second host is actively sourcing one or more packets addressed to a multicast group address;

issuing[, by a receiving host,] a join command to the one or more network devices in an attempt to [reliably] join the multicast group address;

determining whether any packets are received [by the receiving host] within a designated time period [associated with the attempt] after the step of issuing a join command; and

if any packets are received by the [receiving] first host within the designated time period, determining that the [receiving] first host is [reliably] joined to the multicast group address; otherwise, if any packets are not received by the [receiving] first host within the designated time period, determining that the [receiving] first host is not [reliably] joined to the multicast group address[, wherein the sourcing and receiving hosts are selected from the group consisting of a portable wireless communication device, mobile wireless communication device, wireline communication device, wireless console, wireline console, repeater, site controller, comparator, telephone interconnect device, internet protocol telephony device, call logger, scanner and gateway].

3. (Twice Amended) The method of claim 2, wherein the packet[s comprise] is one of a test packet[s] and a payload packet.

4. (Amended) The method of claim 3, wherein the payload packet comprises any one of an audio payload, a data payload, a video payload, and a multimedia payload.

5. (Amended) The method of claim [3, wherein] 2 further comprising the step of [sending packets comprises sending multiple] receiving at least one test packet[s] before [sending] receiving a payload packet.

6. (Twice Amended) The method of claim 2 comprising the step of [sending, from a controller to the sourcing and receiving hosts,] receiving a call grant message[s including] comprising the multicast group address.

Claims 7-8 were cancelled without prejudice or disclaimer.

9. (Twice Amended) The method of claim 2, wherein the step of issuing a join command comprises, sending[, from the receiving host,] an IGMP Join message to one or more [local] network devices.

10. (Twice Amended) The method of claim 2 further comprising the step of, if the [receiving] first host is determined to not be [reliably] joined to the multicast group address, issuing[, by the receiving host,] a leave command to the one or more network devices; and

re-attempting to [reliably] join the multicast group address, comprising the steps of:

issuing[, by the receiving host,] a second join command to the one or more network devices in a second attempt to [reliably] join the multicast group address;

determining whether any packets are received [by the receiving host] within a designated time period [associated with the second attempt] after the step of issuing a second join command; and

if any packets are received [by the receiving host] within the designated time period, determining that the [receiving] first host is [reliably] joined to the multicast group address; otherwise, if any packets are not received [by the receiving host] within the designated time period, determining that the [receiving] first host is not [reliably] joined to the multicast group address.

11. (Amended) The method of claim 10, wherein the step of issuing a leave command comprises, sending[, from the receiving host,] an IGMP Leave message to one or more [local] network devices.

12. (Twice Amended) The method of claim 2, wherein the step of determining whether any packets are received [by the receiving host] within a designated time period comprises the [receiving host, after issuing the join command,] steps of:

starting a timer having a predetermined expiration time; and

determining whether any packets addressed to the multicast group address are received by the [receiving] first host before the predetermined expiration time.

14. (Twice Amended) The method of claim 15 further comprising, if the second host is determined to not be [reliably] joined to the first multicast group address,

issuing, by the second host, a leave command to the one or more network devices; and re-attempting to [reliably] join the first multicast group address, comprising:

issuing, by the second host, a second join command to the one or more network devices in a second attempt to [reliably] join the first multicast group address;

determining whether any packets are received by the second host within a designated time period associated with the second attempt; and

if any packets are received by the second host within the designated time period, determining that the second host is [reliably] joined to the first multicast group address; otherwise, if any packets are not received by the second host within the designated time period, determining that the second host is not [reliably] joined to the first multicast group address.

15. (Twice Amended) A method comprising:

sending, from a controller to a first and second host desiring to participate in a point-to-point call, a first and second multicast group address;

sending, from the first host to one or more network devices, one or more packets addressed to the first multicast group address;

issuing, by the second host, a join command to the one or more network devices in an attempt to [reliably] join the first multicast group address;

determining whether any packets are received by the second host within a designated time period associated with the attempt; and

if any packets are received by the second host within the designated time period, determining that the second host is [reliably] joined to the first multicast group address; otherwise, if any packets are not received by the second host within the designated time period, determining that the second host is not [reliably] joined to the first multicast group address;

sending, from the second host to one or more network devices, packets addressed to the second multicast group address;

issuing, by the first host, a join command to the one or more network devices in an attempt to [reliably] join the second multicast group address;

determining whether any packets are received by the first host within a designated time period associated with the attempt; and

if any packets are received by the first host within the designated time period, determining that the first host is [reliably] joined to the second multicast group address; otherwise, if any packets are not received by the first host within the designated time period, determining that the first host is not [reliably] joined to the second multicast group address.

16. (Amended) The method of claim 15 further comprising, if the first host is determined to not be [reliably] joined to the second multicast group address,

issuing, by the first host, a leave command to the one or more network devices; and re-attempting to [reliably] join the second multicast group address, comprising:

issuing, by the first host, a second join command to the one or more network devices in a second attempt to [reliably] join the second multicast group address;

determining whether any packets are received by the first host within a designated time period associated with the second attempt; and

if any packets are received by the first host within the designated time period, determining that the first host is [reliably] joined to the second multicast group address; otherwise, if any packets are not received by the first host within the designated time period, determining that the first host is not [reliably] joined to the second multicast group address.

17. (Twice Amended) The method of claim 15, wherein the packet[s] comprises one of test packet[s] and payload.

18. (Twice Amended) The method of claim 15, wherein the payload comprises any one of an audio payload, a data payload, a video payload, and a multimedia payload.

19. (Twice Amended) The method of claim 15, wherein the step of sending packets comprises sending multiple test packets before sending payload.

20. (Amended) The method of claim 19, wherein the step of sending packets further comprises sending multiple test packets after sending payload.

21. (Twice Amended) The method of claim 15 wherein the step of sending first and second multicast group addresses comprises sending, from a controller to the first and second hosts, call grant messages including the first and second multicast group addresses.

22. (Twice Amended) A communication system comprising:  
a controller being operable to identify a multicast group address to be used for distributing packet information to participating host devices;  
a packet network for distributing the multicast group address to the participating host devices, the packet network being adapted to set up a multicast distribution tree between participating devices having successfully joined the multicast group address; and  
means for determining whether the participating host devices have [reliably] joined the multicast group address based on whether the participating host devices receive any packets on the multicast group address before expiration of a designated time period[,  
wherein the participating host devices are selected from a group consisting of a portable wireless communication device, mobile wireless communication device, wireline communication device, wireless console, wireline console, repeater, site controller, comparator, telephone interconnect device, internet protocol telephony device, call logger, scanner and gateway].